COMMAND AND CONTROL WARFARE IN FORCED ENTRY OPERATIONS

A Monograph
By
Major Robert D. Grymes
Field Artillery

School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenwoth, Kansas

Second Term AY 94-95

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
		Monograph

4. TITLE AND SUBTITLE
Command and Control Warfare in Forced Entry Operations

5. FUNDING NUMBERS

6. AUTHOR(S)
MAJ Robert D. Grymes

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
School of Advanced Military Studies
Command and General Staff College
Ft. Leavenworth, KS 66027

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Command and General Staff College
Fort Leavenworth, KS 66027

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION UNLIMITED.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

See attached

14. SUBJECT TERMS
Command and control warfare, C2W, Forced Entry Operations, OPSEC, Deception, PSYOP, Electronic Warfare, Destruction

15. NUMBER OF PAGES
48 + 3

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclas	Unclas	Unclas	Unlimited

GENERAL INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to ***stay within the lines*** to meet ***optical scanning requirements***.

Block 1. Agency Use Only *(Leave blank)*.

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C	- Contract	**PR**	- Project
G	- Grant	**TA**	- Task
PE	- Program Element	**WU**	- Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. *(If known)*

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."
DOE - See authorities.
NASA - See Handbook NHB 2200.2.
NTIS - Leave blank.

Block 12b. Distribution Code.

DOD - Leave blank.
DOE - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.
NASA - Leave blank.
NTIS - Leave blank.

Block 13. Abstract. Include a brief *(Maximum 200 words)* factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code *(NTIS only)*.

Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

Major Robert D. Grymes

Title of Monograph: Command and Control Warfare in Forced Entry Operations

Approved by:

Richard M. Swain
Richard M. Swain, Ph.D. — Monograph Director

Gregory Fontenot
COL Gregory Fontenot, MA, MMAS — Director, School of Advanced Military Studies

Philip J. Brookes
Philip J. Brookes, Ph.D. — Director, Graduate Degree Program

Accepted this 19th Day of May 1995

ABSTRACT

COMMAND AND CONTROL WARFARE (C2W) IN FORCED ENTRY OPERATIONS by MAJ Robert D. Grymes, USA, 48 pages.

This monograph investigates the use of command and control warfare (C2W) in forced entry operations. As part of the nation's force projection strategy, forced entry provides a unique capability in the support of multidimensional operations. Commanders and planners at the operational level establish the conditions for successful forced entry operations by using surprise, agility, and overwhelming combat power.

C2W provides the forced entry commander, usually a Joint Task Force commander, with a tool to achieve surprise. Using current C2W doctrine, this monograph discusses considerations that practitioners of forced entry operations should consider. As a basis for analysis, three factors (command structure, intelligence gathering, and integration) focus the inquiry into C2W's effectiveness in two case studies, Operation Urgent Fury and Operation Just Cause.

This monograph concludes with recommendations to design JTF command structures with C2W capabilities; to use human intelligence (HUMINT) for C2W purposes; to harmonize the five C2W components; to consider specific objectives in each phase of operations; and finally, to incorporate public affairs planning that supports today's inevitable involvement by the media.

Table of Contents

Introduction

The information age offers challenging prospects for the warriors of the 21st century. The U.S. is beginning to tap into information resources as a means to implement national policy. The objective of information operations (IO) is to maintain and protect information for friendly decision-making and execution while hampering an enemy's decision-making and execution by manipulating his information system.[1] Information affects all instruments of power. Within the military, the engagement of the adversary's information system is called command and control warfare (C2W), a subset of IO.[2]

C2W integrates five military functions to dominate an enemy's command and control system using information. C2W is:

> the integrated use of operations security (OPSEC), military deception, psychological operations (PSYOP), electronic warfare (EW), and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions.[3]

C2W has both offensive and defensive applications that are applicable for all types of military operations. Without proper integration, C2W duplicates effort, sends conflicting signals, or fails to contribute to the concept of operations. When coordinated effectively, C2W attacks an army's cohesion through attacks on his command and control structure and on his soldiers' morale.[4] As the enemy feels the effects of disorganization and disintegration (i.e., the erosion of unit cohesion), he presents opportunities for exploitation by friendly forces.

C2W is adaptable and effective in support of force projection operations, the centerpiece of U.S. strategy. Force projection covers a

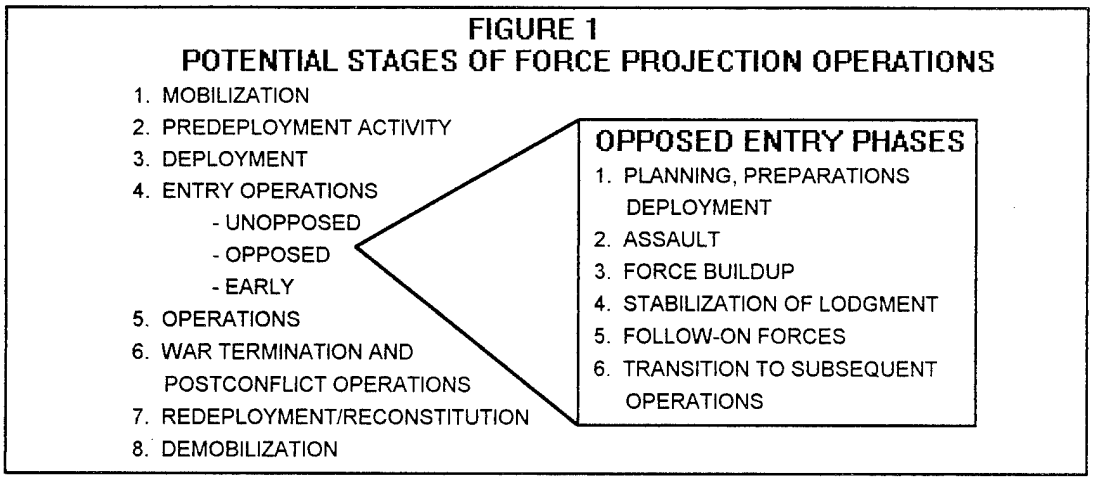
wide range of potential situations that require early, unopposed, or forced entry into a distant area of operations.[5] Of particular importance, planning and executing forced entry operations require, as any operation does, the unique application of the C2W components. C2W engages the enemy in every aspect of his command system. When forced entry is required, C2W enhances the generation of combat power, thus making forced entry a more feasible strategic option. C2W paralyzes or confuses the enemy and allows the U.S. to seize the tactical and operational initiative. Similarly, any adversary, using C2W, can disrupt U.S. operations and cause increased casualties or hinder the rapid accomplishment of the mission. C2W is not a capability that the U.S. can afford to neglect. The purpose of this monograph is to illuminate C2W issues that practitioners of forced entry operations must consider.

The U.S. conducted two forced entry operations in the 1980s: Operation Urgent Fury in Grenada (1983) and Operation Just Cause in Panama (1989). These operations, though different in mission and concept, provide a vehicle by means of which to assess C2W. Operation Urgent Fury exemplifies the crisis action planning (CAP) process while preparation for Operation Just Cause more closely adhered to the deliberate planning process. C2W applied to both, regardless of the mission or the planning process. The evolution of joint operations is also apparent when both operations are compared. Operation Urgent Fury occurred before the Goldwater-Nichols Military Reform Act, whereas Operation Just Cause happened after the 1986 legislation. Since 1986, combatant commanders have exercised greater authority, and correspondingly, joint interoperability has improved by an order of

magnitude. As a result, commanders have streamlined command structures. C2W operations now use joint assets more effectively. Although the term 'command and control warfare' was not in existence during these operations, the military used the forerunner of C2W which was known as command, control, and communications countermeasures (C3CM). In order to assess the applicability of current doctrine, this monograph will explore these two case studies from a C2W viewpoint.

In order to focus on C2W in the case studies, three principal factors will be employed as a basis for analysis. They are command structure, intelligence gathering, and integration of C2W. Command structure affects C2W by providing unity of purpose and by developing orders with clear aims and objectives. Effective intelligence gathering identifies critical C2 nodes prior to employing C2W assets against the enemy's systems. Finally, any C2W asset will require integration with other joint assets to maximize effectiveness. The three factors will provide a point of departure for subsequent discussion about C2W's role in forced entry operations.

Forced entry operations present unique challenges. Forced entry operations accomplish initial objectives designated by the combatant commander and set the conditions for subsequent combat operations within the theater.[6]



Forcible, or opposed, entry can be divided into six phases: (1) planning, preparations, deployment; (2) assault; (3) force buildup (to defend the lodgment); (4) stabilization of lodgment; (5) introduction of follow-on forces (to conduct operations beyond the scope of entry operations); and (6) transition to subsequent operations.[7] (See Figure 1 above.) All six phases contribute to accomplishment of subsequent operational objectives. For example, an airborne force seizes an airfield from which to launch an air assault that secures noncombatants, returns them to the airfield, and evacuates them. The forced entry operation characteristically serves as a means to a higher end: in this case, securing and evacuating noncombatants was the overarching objective.

The forcible entry forces seek to extend their initial and local advantages over the defending forces. On the one hand, the assaulting commander seeks to concentrate his forces at the time and place of his own choosing while capitalizing on surprise. Striking the enemy at a place where he is unprepared or unable to respond forcefully grants the

assaulting commander the time to build-up additional forces and stabilize the lodgment. Even while defending the lodgment, the forcible entry commander secures a foothold by maintaining the initiative and disrupting or delaying enemy responses.[8] After sufficient forces are present to defend the lodgment, follow-on forces arrive for employment in subsequent operations.

Conversely, the defending commander attempts to counter the attacker. Because he cannot ascertain the location of the assault in advance, he is forced to defend all potential lodgments simultaneously. The defending commander can prepare his dispersed defenses by taking advantage of terrain and using available time to improve preparations. While terrain and time constitute advantages for the defender, the success of the defense depends on the timely reactions by defending forces once the threatened airhead or beachhead is identified. The enemy commander directs his forces to move quickly, to disrupt the build-up of forces, and to destroy the assault. The enemy commander uses the counterattack to negate the attacker's initial advantage of surprise and to regain the initiative.

The preceding descriptions of the attackers' and the defenders' actions underscore the importance of surprise and of maintaining the initiative in forced entry operations. Surprise provides an opportunity for the attacker. Consequently, operational commanders plan and execute operations that seek surprise for assaulting forces.[9] One tool which operational commanders use to achieve surprise is command and control warfare (C2W). Surprise assists forcible entry forces to seize the initiative and to maintain their advantage throughout the early phases of forcible entry.

The uses for C2W are numerous. The commander's intent for C2W may be to separate the enemy's command structure from its forces. In this case, deception may support other C2W tools such as OPSEC, destruction, and electronic warfare. On the other hand, the CJTF may consider that leaving the opponent in command of his forces may be more advantageous to mission accomplishment. Thus, "deception may be the main thrust of the C2W operation, while the other C2W tools would be used to control the adversary commander's ability to see the battlefield."[10] The role for C2W depends upon the CJTF's objectives.

C2W provides a vital component of an operational commander's arsenal. Joint operations empower C2W with a multi-faceted capability. As an adversary reacts to the efforts of one service, he exposes himself to the other members of the joint team.[11] For example, an Army PSYOPs team conducting radio broadcasts on the ground complements an Air Force PSYOPs aircraft broadcasting television messages. In deception operations, multiple indicators by land, air, and sea forces induce an enemy to adopt a particular defensive stance; the joint deception story is more believable than the efforts of a single service.

Using joint operations, C2W operations achieve command and control superiority (or supremacy) at the operational level by:

> (1) Disrupting the adversary's decision cycle.
> (2) Slowing down the adversary's processing of information through the decision cycle.
> (3) Influencing the adversary's "estimate of the military situation."
> (4) Preventing the adversary from disrupting, slowing, or influencing the friendly commander's decision cycle.[12]

Command and control superiority seeks to capture and maintain the initiative at the operational level. The objectives of command and

control superiority enumerated above fall into two major categories: counter-C2 and C2-protection.

Counter-C2 is the offensive component of C2W that "seeks to prevent the effective command and control of adversary forces by denying information to, influencing, degrading, or destroying the adversary command and control system."[13] The system includes the commander and his staff, his subordinate commanders, the communications medium used to direct operations and transfer information, and the intelligence infrastructure that supports the adversary commander. Counter C2 also includes the compilation of psychological profiles that incorporate cultural biases and perceptions of adversary commanders and their forces.[14]

The defensive component of C2W is C2-protection. Its purpose is "to deny, negate, or turn to friendly advantage, adversary efforts to destroy, disrupt, and/or deny information to US and allied/coalition C2 systems."[15] C2-protection seeks to foil an enemy's counter-C2 actions. C2-protection focuses on the friendly command and control system, its processes, and friendly psychological profiles. An enemy, when faced with overwhelming force, may use counter-C2 as his principal weapon. A more sophisticated force, such as those of the United States, may also be more susceptible to counter-C2 due to the complexity of its systems. Hence, friendly C2-protection assumes even more importance when facing a seemingly weaker enemy.[16]

If C2W creates the conditions for operational surprise, then the combatant commander must organize and plan for C2W. First, he must devise a command and control structure that is properly manned and that provides the flexibility and responsiveness to operate in an environment

as chaotic as forcible entry. The uniqueness of forcible entry operations requires a specially tailored organization. Typically, the combatant commander establishes a joint task force (JTF).[17]

The combatant commander takes many factors into account when building a JTF. The two most important considerations are the mission to be accomplished and the objective to be attained. From these considerations, the combatant commander organizes, "the commands and forces within that command as necessary to carry out missions assigned to the command."[18] Joint task forces are one of the most capable command and control options available to the combatant commander. When organized properly and formed from joint units that habitually conduct exercises together, the JTF, "provides for unity of effort, centralized direction, decentralized execution, common doctrine, and interoperability."[19]

Unity of effort is the foremost consideration at the combatant command level and can be realized in two ways. Unity of effort is achieved through the design of the command structure and through the clear articulation of aims and objectives.[20] Because forcible entry forces are jointly organized and integrated, JTF commanders provide for unity of command. In forcible entry operations, "unity of command takes precedence over all other C2 considerations."[21] Whereas unity of effort may be achieved through cooperation and coordination among all forces, unity of command places all forces under one responsible commander, "with the requisite authority to direct all forces in pursuit of a unified purpose."[22] Unity of command provides more centralized control as a means to achieve unity of effort. Remembering the joint nature of OPSEC, military deception, PSYOP, EW, and destruction, unity of command

weaves these diverse military disciplines together more intimately than one can expect through cooperation and coordination of parallel headquarters. Unclear lines of authority and responsibility undermine forcible entry operations in general and C2W in particular.

Achieving unity of effort requires not only organization of forces, but also the clear articulation of aims and objectives by the CJTF. The JTF staff plays an important role in translating the commander's desires into clear directives. The staff should be made up of professionals who provide the capability to plan and integrate C2W efforts using all available joint assets. The J-3 Operations Directorate exercises staff supervision over all five components of C2W.[23] Augmentation to complete the staff, or to provide a joint capability, is an essential requirement for a newly forming JTF, especially in a time-sensitive, crisis scenario.

With professional expertise in the staff, the depth and breadth of planning improves. Ideally, the JTF is formed early in the crisis action planning (CAP) process, "to allow the designated [CJTF] and staff to participate in the remainder of the CAP process."[24] Obviously, early involvement saves time for the JTF and grants more time to the subordinate component commands. Planning and coordinating OPSEC, military deception, psychological operations, EW, and destruction take time to be effective. Intelligence requirements which support C2W can be met when identified early in the planning process. Operational deception as a counter-C2 measure, for example, may take time for friendly forces to execute, for enemy forces to receive, and for friendly forces to assess. Planning that begins at the end of the CAP

process may eliminate C2W options that were available to the commander only days earlier.

Unity of effort depends upon the clear articulation of orders as much as command and staff organization. Well-integrated orders direct subordinates to perform tasks and prevent duplication or contrary efforts. For C2W, the JTF, or the echelon above corps headquarters, normally represents the echelon which has the perspective and authority to integrate joint assets most effectively.[25]

The C2W effort depends heavily on the second critical factor, intelligence gathering. Considering that C2W uses information to engage the enemy's command and control system, intelligence naturally plays a key role in the effectiveness of each C2W component. During planning, the intelligence estimate includes the enemy's "goals, objectives, strategy, intentions, capabilities, methods of operation, vulnerabilities and sense of value and loss."[26] Intelligence planners and C2W staff proponents continually refine these assessments into C2W-specific items such as deception objectives, PSYOPs themes, friendly and enemy vulnerabilities for OPSEC, and targets for electronic attack or destruction fires. In execution, intelligence verifies enemy reactions to friendly counter-C2 and C2-protection and develops new assessments for subsequent operations. From the intelligence data, C2W planners then integrate the C2W components into a coherent concept.

Integration of C2W as an integral part of an operational commander's concept provides a force multiplier. For forcible entry operations, operational commanders use C2W to achieve surprise. The joint manual, Forcible Entry, addresses how an operational commander

manipulates deception, OPSEC, PSYOPs, electronic warfare, and destruction to surprise the enemy. Specifically,

> Surprise conceals friendly capabilities and intentions to create opportunity to strike the enemy when he is unaware or where he is unprepared. . . It is not essential that enemies be taken by surprise, but only that they become aware too late to react effectively. Speed, employment of unexpected factors, effective intelligence, various methods and tactics of operation, and operations security contribute to effective operational surprise.[27]

Strategic planners also recognize the importance of operational surprise in forcible entry operations. When the JCS issues the CJCS Warning Order, the message normally contains JCS guidance for "OPSEC and Deception Guidance," "PSYOP Guidance," and "Intelligence Guidance."[28] Thus, strategic goals and assets coincide with the needs of the operational commander.

The challenge for C2W planners is to use the C2W components to achieve the desired effect of surprise. Since forcible entry consists of six potential phases, C2W employment address all six phases that include a smooth transition to the force projection phase of combat operations.

Forced entry operations pose significant challenges for the attacker and the defender. C2W, through counter-C2 and C2-protection, provides the operational commander with a tool to gain surprise. The initial advantage gained by C2W has implications that reverberate throughout the duration of the operation. The following case studies will offer observations about the C2W's effectiveness and its linkage to an operation's successful outcome.

Operation Urgent Fury

The first case study, Operation Urgent Fury, is more notable for opportunities missed rather than exploited. The operation helps in understanding the challenges which JTF planners faced in a CAP process. However, time-constrained planning cannot be blamed entirely for the disjointed C2W effort.

The Grenada crisis began on 13 October 1983 when the island nation's supreme governing body, the Central Committee of the New Jewel Movement (NJM), stripped power from the prime minister, Maurice Bishop, and placed him under house arrest. Bishop had been the leader of the committee and the NJM, until his political rival, Bernard Coard, assumed power in the bloodless coup. The JCS alerted U.S. Atlantic Command (LANTCOM) on 14 October to start planning for a possible noncombatant evacuation (NEO) operation. On 19 October 1983, Bishop was killed during a public demonstration along with fifty civilians. Subsequently, the new leadership imposed an around-the-clock curfew. That same day, the U.S. Ambassador in Barbados, who had regional responsibility for the southern Caribbean, to include Grenada, recommended preparations for an immediate NEO to remove U.S. citizens on the island if required. The JCS subsequently issued a warning order to LANTCOM that the NEO was required immediately. This warning order pushed U.S. planning into high gear. Six days later on 25 October 1983, the U.S. intervened.[29]

The compressed planning cycle clearly affected the command and staff structure, the available intelligence, and the integration of C2W. On 20 October, the LANTCOM initial planning effort devised noncombatant evacuation options for permissive and nonpermissive situations. On 21

October, the JCS broadened its objectives and directed LANTCOM to prepare an alternative plan to seize the island. On that same day, the chairman of the JCS, General John Vessey, also notified the Military Airlift Command, the Readiness Command (REDCOM), and the Joint Special Operations Command (JSOC), to provide forces for LANTCOM's impending operation.[30] On 23 October, the JCS directed LANTCOM to execute the final version of the plan in less than forty-eight hours.[31]

General John Vessey, Chairman, Joint Chiefs of Staff, notified LANTCOM on 21 October that the plan had expanded beyond a NEO into a full-scale forcible entry operation to seize the island.[32] Admiral MacDonald, the commander-in-chief of LANTCOM, correctly concluded that a JTF was required to pull the forces together and quickly execute the plan. On 22 October, he notified (but did not activate) JTF 120, a headquarters that had previously been formed in LANTCOM exercises. MacDonald had forewarned the commander of JTF 120, Vice Admiral Joseph Metcalf III, to prepare to command the mission. Metcalf sent liaison officers to the LANTCOM staff to keep him informed about the various options JCS and LANTCOM were considering. Metcalf consciously chose not to participate in the formative stages of the JCS/LANTCOM plan.[33] When the JCS sent the final version of Operation Urgent Fury to LANTCOM on 23 October, JTF 120 was formally activated and then became fully involved in planning and coordinating an operation that was to begin in only thirty-nine hours.[34]

When planning during a crisis, if one course of action is superior, joint doctrine specifies that the JTF should be activated early to allow parallel planning with the remainder of the Joint Planning and Execution Community (JPEC).[35] By failing to do so, not

only did Metcalf lose almost forty-eight hours in planning, but he also failed to identify additional joint staff officers for his staff.

The late involvement of JTF 120 exacerbated what was already a time-constrained planning sequence. JTF 120 had not exercised for an operation of this sort.[36] The planning for the seizure of Grenada, primarily a land operation, was accomplished by a naval staff with minimal augmentation. There was no time to assemble the 88 augmentees that normally reported to JTF 120 when it was fully activated. As an expedient, Metcalf selected augmentees from his own 2d Fleet staff.[37] This limited pool of officers continued to reflect the predominant naval influence on the JTF. This naval perspective would have consequences for joint C2W planning.

Major General Norman Schwarzkopf, then commanding the 24th Infantry Division (Mechanized), and two army majors became part of the JTF staff along with army liaison teams from the 82d Airborne Division and the Rangers. There was also a USAF representative on the JTF 120 staff.[38] JTF 120 did not have the personnel to integrate deception, PSYOPS, EW, OPSEC, and destruction into a coherent plan. Without a joint planning staff, Metcalf's naval staff produced single service solutions when jointly planned options would have brought together complementary forces and effects.[39] As far as C2W was concerned, the inadequate augmentation of the staff hampered integration that would have made C2W more effective.

Before planners can integrate C2W into their plans, they need intelligence. Operational intelligence provides the basis for developing counter-C2 and C2-protection plans that are both complementary and pertinent to the specific circumstances.

Intelligence-gathering and dissemination could have better supported C2W planning given the reality of a time-constrained crisis.

The Grenada crisis had been developing since Coard, Bishop's political rival, took over on 13 October. When Vice President George Bush convened the first Special Situation Group on 20 October, he was shocked to learn that "there was no CIA agent on the island, that nothing was known about the military situation, and that no aerial photographs had been taken of Salines for more than five months."[40] Nevertheless, the intelligence community could still have recovered if they had implemented a collection plan immediately. Aerial photographs could not, however, provide the detailed information that was necessary for C2W planning. That, only human intelligence (HUMINT) could provide. There appear to have been three opportunities to gain human intelligence directly from U.S. sources. On 22 October, a U.S. envoy team landed in Grenada and remained there until after the invasion. These State Department personnel, if augmented with a CIA representative, could have sought out information.[41] In addition, LANTCOM did attempt to insert SEALs on each of the two nights preceding the invasion to gain HUMINT. Both missions failed.[42]

Despite the failure of these American intelligence efforts, the U.S. also failed to capitalize on readily available information in Barbados. The Barbados Defence Force and the Regional Security System had extensive knowledge of the Peoples' Republic of Grenada (PRG) and the Peoples' Republic Army (PRA).

> Barbados had infiltrated persons into Grenada on October 17 and carried out an island surveillance flight. All relevant information Barbados possessed, including an intelligence assessment of the strengths and deployment of the PRA, was passed

to the U.S. embassy in Bridgetown. The defense attache . . . dutifully sent everything he received to Washington; . . . ."[43]

Clearly this information would have filled some of the void in Washington and in Norfolk. Without intelligence, counter-C2 could not realize its potential against such things as the enemy's decision making process, his communications, his information sites and hardware, or the psychological profiles of Grenada's key leaders.[44] Fortunately for the U.S., Grenadian counter-C2, the offensive category of C2W, was so poor that the U.S. enjoyed an immense advantage before the operation even began.

Given the command and staff structure, and the intelligence available, integration of C2W yielded mixed results. U.S. forces achieved C2 superiority early in the operation. This analysis will focus first on C2-protection and next on counter-C2.

C2-protection seeks to defend against the enemy's counter-C2. Command and Control Warfare states that an enemy must have three capabilities to conduct counter-C2:

- Adequate intelligence to find friendly C2 nodes.
- A C2 system to direct resources against friendly C2 nodes.
- A means (either traditional military or non-traditional) to conduct counter-C2.[45]

These three capabilities were weaknesses in the fledgling PRA, although the PRA used two principal means, psychological operations and operations security. Through radio broadcasts, the PRG sought to convince the populace that invasion was imminent and to rally the people to defend their homeland. Since there were no independent newspapers in Grenada, the radio provided almost all the information the people received. These broadcasts were also subject to monitoring throughout the region; without other intelligence sources, the broadcasts gave the

impression that Grenadians were fully mobilized and prepared to die for their cause. This PSYOPs theme was possibly aimed at any potential invader to discourage their intervention. As a secondary purpose, the pro-government radio broadcasts attempted to instill confidence in the Grenadian people about the new government to be formed consequent to Bishop's death.

The PRG imposed strict OPSEC measures to deny information to sources outside Grenada. Journalists were expelled, nearly all telephone and telegraph services were suspended, and a "twenty-four shoot-on-sight curfew" was implemented. The PRG also denied landing permission to U.S. consular officials until 22 May. By denying information to the adversary (American) command and control system, the PRG also limited the incoming information. Both the Americans and the Grenadians would subsequently learn that OPSEC can have adverse effects on both sides.[46]

PRA destruction capabilities were limited. The PRA's capability to destroy U.S. operational command or information sites was limited to a seven 130mm M-46 field guns and twenty 122mm rocket launchers. There is little evidence to suggest that these systems were employed effectively if at all. To deal with the American airborne command and control center (ABCCC) or the Coronet Solo aircraft, the PRA had eighteen twin 23mm towed air defense guns and more than thirty heavy machineguns in two varieties: the quadruple 14.5mm ZPU-4 gun and single 12.7mm gun. U.S. command and control aircraft took advantage of stand-off ranges to render the PRA optically-guided air defense guns ineffective. Grenadians lacked early warning or target acquisition radars to complement their gun systems.[47]

The other C2W components did not apply. Grenada did not possess an EW capability. In addition, the PRA did not employ any deception plans to mislead U.S. decision-makers. The U.S. seized the initiative early in the conflict and forced the PRA to react to U.S. actions. The PRA took no offensive actions, to include counter-C2, at the operational level once the invasion commenced.

For forcible entry operations, C2W, even in C2-protection, seeks to preserve surprise. Prior to the invasion, the U.S. did not take any overt action to counter the weak Grenadian threat. After the invasion began, the enemy, lacking C2W expertise, displayed unimaginative leadership in the PRA and did not undertake any notable counter-C2 operations. Thus, friendly C2-protection capabilities were not essential for this operation.

While PRA C2W efforts relinquished the initiative, the U.S. effectively employed counter-C2 to expand its margin of command and control superiority. Friendly forces increase their combat power in relation to the enemy if those friendly forces suffer less from disorganization than the enemy. JTF 120 achieved an significant advantage through counter-C2.

Because of the short preparation time in the Grenadian crisis, the main effort of U.S. forces prior to the invasion was on OPSEC. U.S. leadership correctly assessed that preparations should not betray JTF 120's efforts to achieve surprise. The cost of overly stringent OPSEC did however desynchronize JTF 120's forcible entry operation. Key joint planners such as Brigadier General Robert Patterson, Military Airlift Command, or Vice-Admiral William Cowhill, Deputy JCS for Logistics, missed or were excluded from initial planning sessions.[48] General

Vessey continually stressed the need for OPSEC by relying on voice rather than written official communications.[49] The "stove-piped" dissemination of information prevented peripheral users from conducting coordination. Feeling a need to restrict access to sensitive information, operational planners refrained from addressing other key issues, "such as PSYOP, the press, [and] prisoners of war (especially the Cubans) . . . ."[50] The predominately naval staff at LANTCOM and JTF 120 then sacrificed surprise won through OPSEC when their overemphasis on emplacing navigational aids delayed the initial airborne assaults until well after daylight. The U.S. forfeited its night fighting advantage.[51] Whereas the intended purpose of OPSEC in counter-C2 is to deny information to the adversary command and control system, these particular applications of OPSEC seem only to have hindered U.S. planning and execution.

As an unavoidable aspect of modern warfare, the media also compromised OPSEC to a degree. By excluding U.S. electronic and print media from Operation Urgent Fury, Admiral Metcalf did seek to preserve surprise.[52] However, in the 22 October Sunday papers, the British media did speculate on the possibility of a joint U.K.-U.S. invasion. The source for this disclosure was PRA General Austin's comments to a British reporter.[53] The PRA had learned of an impending invasion on Sunday, 22 October. Austin's acknowledgment was the result of several leaks. First, the press learned of the diversion of the Marines from Lebanon to the Caribbean on 22 October.[54] Second, Prime Minister Burnham of Guyana is believed to have tipped off the PRG that an invasion by the Caribbean Commonwealth (CARICOM) with the assistance of other foreign forces (possibly the U.S.) was imminent.[55] In response,

Radio Free Grenada announced that armed forces from the Organization of Eastern Caribbean States (OECS) were staging in Grenada, and along with warships positioned in Grenadian territorial waters, the invasion would be conducted that night (22-23 October).[56] It was, and is, probably inevitable that the media will disclose some important aspects of modern military operations.

Although the media found that an invasion was probable, operational planners did maintain secrecy regarding the place and time of the invasion. To their credit, LANTCOM and JTF 120 imposed OPSEC measures which cloaked American preparations. One overused measure was the limited disclosure and dissemination of information. The U.S. also minimized the signatures of military movements and command and control arrangements through the standard OPSEC categories of operational, technical, and administrative measures. The disposition of American units remained ambiguous.

The role of deception in supporting OPSEC was minimal. At the strategic and operational level, an overt action to portray a deception story was not feasible because time was short and there was no deception plan that would achieve the desired effect without alarming the Grenadians or their Cuban or Soviet counterparts. In support of OPSEC, the only major deception effort was to alert all participating units under the guise of an exercise.[57]

As the invasion began, destruction and PSYOPs overshadowed OPSEC and deception. Information dissemination within Grenada was dependent on the Radio Free Grenada station at Beausejour. The PRA used the radio transmitter to mobilize the militia and to broadcast propaganda to the public. The first C2W action of the assault phase was the destruction

of the Beausejour transmitter using naval gunfire directed by SEAL Team Six.[58] Destruction of the radio station effectively nullified the mobilization of the militia. The U.S. quickly stepped in to fill the void in information by using its own PSYOPs capability.[59] Unclassified sources failed to determine if the initial broadcasts came from radio stations in Barbados, from the Voice of America station in Antigua, or from USAF aircraft.[60] In any case, as the assault troops went in, operational-level PSYOPs themes:

> . . . called on Grenadians in general to co-operate with the invading force which had come to put an end to what was termed the years of chaos of the Bishop administration. They called on members of the PRA to give themselves up and face their inevitable defeat. In Spanish [for the Cubans; the Grenadians spoke English] a set of tapes promised that there would be no battle with the Cubans if they did not attack the invasion force and reminded the construction workers and others of their families back in Cuba.[61]

As forces advanced inland, a portable U.S. ground-based transmitter, which later assumed the name "Radio Spice Island," continued the same themes.[62] Around mid-morning on D-Day, after Navy A-7 pilots destroyed the auxiliary radio transmitter at Morne Rouge, the U.S. secured a total monopoly on the information disseminated to the public.[63]

In fact, the Grenadian people, "saw the Americans as rescuers."[64] U.S. propaganda cleverly co-opted Grenadian support by, "avoiding criticism of Bishop (no friend of America) and instead portrayed the charismatic leader as a martyr to Soviet, Cuban, and radical oppression."[65] PSYOPs exploited this potential schism in the civil-military relationship with great success. While PSYOPs concentrated on the the enemy's morale and fostered the disintegration of PRA forces and

public support, destruction of key command posts precipitated the disorganization of the PRA.

From the beginning of the operation, operational commanders sought to unhinge PRA resistance by attacking their command and control centers. Initially, U.S. aircraft bombed Butler House and Fort Rupert; both of which were assumed to be command and control sites.[66] From monitoring Cuban radio broadcasts, intelligence confirmed that Fort Frederick coordinated PRA defenses. Navy A-7s destroyed Fort Frederick at 0140 hours on 26 October; thereafter, coordinated defenses ceased and only local, isolated actions continued. In Admiral Metcalf's opinion, destruction of Fort Frederick achieved command and control supremacy and the outcome of Operation Urgent Fury was never again in question.[67]

C2W in Operation Urgent Fury was clearly a success. Yet, C2W was not developed to its fullest potential. First, the overzealous OPSEC measures have already been discussed. Second, the effectiveness of PSYOPs is attributable to the extraordinary efforts of the PSYOPs community despite its late inclusion into the operation. There were no PSYOPs planners on the JTF 120 staff. All planning took place at LANTCOM or above.[68] Eventually, PSYOPs units were placed under the 82d Airborne Division civil-military affairs officer (G5).[69] As a C2W component, staff prominence must reside in the J3/G3 to ensure timely and complete coordination. Finally, the destruction of the Fort Frederick command center would have maximized PRA confusion had it occurred at H-Hour. C2W catalyzes the rapid disorganization and disintegration of enemy forces.

C2W would be used to greater effect in the next case study, Operation Just Cause in Panama. In this situation, command structures, intelligence, and integration improved upon the precedent in Grenada.

Operation Just Cause

In contrast to the crisis action planning process of Grenada, planners for Operation Just Cause enjoyed the luxury of time in the two-year evolution of what eventually became PLAN 90-2. Nevertheless, initial plans bore little resemblance to whose which were eventually executed. After General Maxwell Thurman assumed command of US Southern Command (SOUTHCOM) on 30 September 1989, he made LTG Carl Stiner, commander of XVIII Airborne Corps, his joint task force commander. Thurman embraced LTG Stiner's vision of employing overwhelming combat power to strike hard and fast against dispersed critical objectives.[70] The outgoing SOUTHCOM commander-in-chief, General Frederick Woerner, had sought the opposite effect using a gradual and protracted build-up of forces. Woerner had wanted a less heavy-handed approach: his concept was to send a clear message upon which opponents of Noriega would capitalize by ousting the dictator from power.[71] In essence, in order to solve the Panamanian problem, Thurman envisioned an American solution; Woerner, a Panamanian solution. C2W would weigh heavily in Thurman and Stiner's plan to deliver a "knockout blow" before the Panamanian Defense Forces (PDF) knew what hit them.

For C2W to be effective, command structure was critical. XVIII Airborne Corps provided the core headquarters around which Joint Task Force-South (JTF-South) formed. General Thurman designed JTF-South with

four major components: Army, Navy, Air Force, and Joint Special Operations.[72] Thurman would ensure not only unity of effort but also unity of command. In keeping with Thurman's precedent, Stiner purposefully designed his command and staff structure with clear lines of authority.[73] Consequently, JTF-South bore complete responsibility for planning and executing Operation Just Cause. SOUTHCOM and JTF South explored options, refined concepts, and coordinated externally with all joint players. The uncomplicated command structure, along with adequate time for planning, would pay handsome dividends in execution.

JTF-South planners also benefited from the Woerner's earlier planning efforts. The combat phase of Woerner's plan, Operations Plan Blue Spoon, directed a gradual force build-up in a display of U.S. resolve. JTF-South, although they rejected the concept, maintained several worthwhile components and shed its weaknesses. Until the crisis began, SOUTHCOM supervised the situation in Panama through JTF Panama, which was organized almost exclusively around U.S. Army South (USARSO), the Army component of SOUTHCOM. JTF Panama managed American-PDF confrontations and implemented American responses calculated to limit escalation. For offensive operations, Thurman would activate JTF-South, deactivate JTF Panama, and transfer JTF Panama staff and units to JTF-South.[74] JTF-South benefited from JTF Panama's expertise when those personnel joined JTF-South for the operation. JTF Panama's strength, more than any other, was its intelligence-gathering capability.

Intelligence organizations assessed PDF operations and intentions on a day-to-day basis and identified Panamanian C2W capabilities and vulnerabilities. Unlike Grenada, situation and target development in Panama came overwhelmingly from human intelligence (HUMINT).

Intelligence came from three major activities. First, Major General Marc Cisneros, the U.S. Army South (USARSO) commander, conducted exercises designed to enforce U.S. maneuver rights in accordance with the Panama Canal treaties. By late-summer of 1989, Cisneros' exercises, initially called *Purple Storm* and later *Sand Flea*, were in full swing.[75] These exercises clearly irritated the PDF and frequently led to confrontations. PDF reactions provided invaluable intelligence and were duly noted by JTF Panama and JTF-South during their planning. Ultimately, LTG Stiner gained an accurate picture of the PDF in Panamanian society. The PDF centrally controlled all aspects of Panamanian life through its military, police, and Mafia activities.[76] Attacking the PDF eventually became the centerpiece of the forcible entry operation.

Second, planners observed Noriega's command and control structure in action during the Quezada and Giroldi coup attempts. On 15 March 1988, Major Fernando Quezada, a PDF staff officer, failed in an attempt to overthrow Noriega at the Commandancia. The coup alerted SOUTHCOM planners about the fragile loyalty that existed within the PDF.[77] The second coup attempt occurred in October, 1989, and clearly displayed which units maintained strong allegiance to Noriega. The 7th Infantry Company, Battalion 2000, and the UESAT counterterrorist troops all responded to Noriega's call for reinforcements.[78] American planners incorporated both Noriega's and the PDF's reactions into the OPLAN concept.

Third, one of the objectives of the operation was to apprehend General Noriega. Finding Noriega would prove to be a difficult intelligence task. Several weeks prior to the invasion, SOUTHCOM began

to track the general continuously to determine his daily activities, routes, communications, and patterns of activity.[79] The dictator tightly controlled the PDF; without his direction, PDF responses would be slowed or delayed. Removing Noriega for effective command and control of his forces would secure a great advantage by achieving surprise.

The streamlined command structure and comprehensive intelligence facilitated the integration of C2W. U.S. forces would secure C2 supremacy early during the invasion. Against U.S. supremacy, Panamanian forces conceded the initiative at the operational level and subsequently fought isolated tactical engagements. Analysis of C2-protection and counter-C2 demonstrates the degree of U.S. C2 supremacy in Operation Just Cause.

The purpose of U.S. C2-protection is to deny the enemy's successful execution of his counter-C2. In this case, the U.S. sought to prevent Panamanian interference with U.S. command and control. The U.S. had to be concerned with Panamanian attempts to deny information to, to influence, to degrade, or to destroy the U.S. command and control system.

From the Grenada case study, it was established that an enemy needs three capabilities to conduct counter-C2: intelligence, a C2 system, and a means. The Panamanians possessed a limited aptitude in each of the three areas. The first capability, intelligence, inaccurately assessed U.S. intentions. Intelligence is critical in devising a plan of action. "General Stiner believed that either Noriega and his advisors did not completely trust their own information, or they were too incompetent to take all the necessary measures to mount a

proper defense throughout the rest of Panama."[80] Without forewarning, Panamanian counter-C2, the offensive category of C2W, was severely disadvantaged.

The Panamanian command structure also failed in executing a counter-C2 response. By disregarding indications and warnings of an invasion, the overwhelming combat power employed by the U.S. prevented Noriega and the PDF from employing any effective offensive action. The PDF surely knew the location of U.S. command posts at Ancon Hill, Fort Clayton, and Howard Air Force Base. The PDF had little capability to strike back with one the invasion began. Panamanian counter-C2 was completely neutralized by U.S. counter-C2.

The third capability to conduct counter-C2, the means, were limited from the outset. The Panamanians relied on only two principal means to conduct counter-C2: PSYOPs and destruction. No coherent plan for deception, OPSEC, or EW is evident from unclassified sources.

Noriega's regime implemented PSYOPs through several means. First, radio and TV stations broadcasted pro-Noriega propaganda to bolster support for the government while discrediting the "Yankee imperialists." From the viewpoint of other Latin American countries, U.S. involvement in the region smacks of imperialism, a characterization which the U.S. wanted to avoid.[81] Second, Noriega convinced an Organization of American States delegation that "military maneuvers by the United States were partly responsible for their failed efforts to coax Noriega from power."[82] The delegation stated that the *Sand Flea* exercises impeded negotiations to transfer power from Noriega to opposition parties. Noriega had no intention of stepping down in the first place; after he had rigged the May, 1989 elections, the U.S. exercises were a convenient

scapegoat to divert attention from Noriega's corruption.[83] Third, the PDF's constant harassment of U.S. soldiers and families sought to manipulate U.S. will to intervene. Noriega possibly anticipated that threats to American lives in Panama would make U.S. decision-makers take counsel of their fears regarding hostage-taking by the PDF.[84]

Besides being a PSYOPs weapon, the PDF served as Noriega's principal tool of destruction in times of crisis. In both coup attempts, PDF loyalists acted to capture and kill coup leaders. Against the massive U.S. invasion, the PDF could not respond to destroy U.S. command and control sites or key leaders. By attacking the PDF, Noriega was denied from using the only asset capable of degrading or destroying U.S. command and control.

Intelligence and command and control failures made the limited PDF means to conduct counter-C2 irrelevant. JTF-South planners understood PDF capabilities and reactions as a result of U.S. intelligence-gathering in the months preceding the invasion. Intelligence, though not a principal component of C2W, is an effective countermeasure to enemy OPSEC. Thus, the PDF was not successful in denying information to U.S. command and control. In order to maintain surprise, JTF-South limited its C2-protection measures to OPSEC. Against an enemy which employs limited counter-C2, the U.S. had to commit minimal assets in response. The U.S. enjoyed C2 superiority over the PDF even before the operation began. In the months before the invasion, the U.S. would use its own counter-C2 operations to increase its command and control advantage.

In identifying strategic military objectives to neutralize the PDF and capture Noriega, JTF-South planners designated two key targets that

would transform American C2 superiority into C2 supremacy in the opening hours of the assault.[85] The Comandancia, the PDF headquarters, became one C2W objective; apprehending Noriega became another.[86] U.S. counter-C2 efforts crafted the C2W components before and after the invasion to maximize surprise for the forcible entry.

Pre-conflict counter-C2 emphasized OPSEC, deception, EW, and PSYOPs. OPSEC cloaked U.S. planning and preparations. After Thurman assumed command, the XVIII Airborne Corps staff began bi-monthly deployments on weekends to conduct planning sessions while maintaining a low signature.[87] In addition, preparations avoided indirect indicators of military action such as increased airlift activity or logistical coordination.[88] On 19 November, 1989, SOUTHCOM issued an evacuation order to reduce the number of military dependents in Panama below five hundred. On the same day JTF-South deployed four Sheridan tanks and six AH-64 Apache helicopters to Howard Air Force Base. SOUTHCOM concealed its deployment of military equipment into Panama with the redeployment of dependents to the United States.[89] Several days before the operation began, special operations units deployed twenty MH-6 scout and AH-6 attack helicopters to Howard Air Force Base. Air Force HH-53 Pave Low and MH-60 Pave Hawk helicopters flew in under their own power and were also hidden in hangars. These units trained under the mask of darkness each night to gain familiarity with potential objectives, routes, and visibility conditions in the area.[90] These measures are the most notable examples of U.S. OPSEC to deny information to Noriega and the PDF.

Deception and PSYOPs also played an important role in U.S. counter-C2 prior to 20 December. During the two years in which the plan

developed, SOUTHCOM deployed units as security enhancements to forward-deployed units already in Panama. These deployments and exercises desensitized Noriega and the PDF to U.S. responses during crises.[91] The *Purple Storm* and *Sand Flea* exercises not only collected intelligence but also conditioned the PDF to U.S. activity designed to exercise treaty rights. These exercises were also rehearsals on actual objectives.[92] These exercises also supported PSYOPs. The constant confrontations with the PDF demonstrated U.S. moral ascendancy over the PDF.[93] The goal of pre-conflict counter-C2 is to increase the potential for achieving surprise and generating overwhelming combat power.[94] As in Grenada, operational commanders would employ a combination of C2W components to induce the enemy's disorganization and disintegration.

After the execution order was received, JTF-South changed its pre-conflict counter-C2 to achieve C2W objectives in combat. Similar to Grenada, JTF-South used an emergency deployment readiness exercise (EDRE) as a deception to support OPSEC while U.S. forces assembled.[95] Another significant OPSEC consideration was Stiner's decision to establish H-Hour at 1:00 a.m. Night combat would hide U.S. dispositions as well as complement American capabilities and training.[96] OPSEC would support surprise and would establish the conditions for destruction of key C2 sites.

Whereas destruction is obviously unacceptable in pre-conflict conditions, the destruction of the Comandancia and the elimination of Noriega from power would assume dominant roles during the invasion. The C2W objective was to "decapitate the PDF by eliminating its leadership and severing its command structure with an airborne strike."[97] The destruction of the Comandancia dismembered coordinated PDF responses and

immobilized PDF resistance in the outlying provinces.[98] In the days following the forcible entry operation, JTF-South would deal with these units at their leisure.

Capturing Noriega would prove to be a more difficult mission. Noriega practiced C2-protection by sleeping in different places each night and avoiding established patterns of activity.[99] The wily dictator successfully avoided JTF-South's Task Force Green until he finally sought refuge in the Vatican Embassy on 24 December.[100] Nonetheless, the relentless pursuit of the special operators effectively denied Noriega the command of the PDF. Special operations forces proved that they can be as efficient as destruction by rendering their target combat ineffective.

EW and PSYOPs achieved varied outcomes. Electronic attack against "a broad range of transmitters" was synchronized just before H-Hour; these transmitters were rendered ineffective during the assault by the jammers. Operational PSYOPs also began around H-Hour. Special Forces disabled a television tower owned by the local television station channel two. Thereafter USAF aircraft transmitted PSYOPs messages over television frequencies to the local population.[101] Unfortunately, the video transmission displayed only the seal of the Department of Defense with no audio message at all. Although Noriega supporters were denied the television station, *Radio Nacional* continued to operate for several days while broadcasting its pro-Noriega propaganda.[102] Failure to control radio transmissions detracted from the PSYOPs effort.

The forcible entry phase of Operation Just Cause was an unqualified success. The synchronized attack of C2 targets caused enemy disorganization and disintegration at the operation's most critical

time: the assault and force build-up phases. U.S. forces maintained their C2 structure, while the PDF's command structure was literally destroyed. U.S. forces clearly gained C2 supremacy within the first few hours of the operation and exploited an advantage from which the PDF could not recover.

Conclusions: C2W and Forced Entry

In retrospect, C2W in both Operation Urgent Fury and Operation Just Cause were successful. The analysis has shown that JTF commanders in both operations used at least the separate components of C2W and achieved effects that contributed towards the eventual outcome. This final chapter will investigate joint doctrine for C2W and will conclude, in light of the case studies, with recommendations for improving C2W in forced entry operations.

The emphasis on jointness and the rise of joint doctrine eventually produced Joint Pub 3-13, Joint Doctrine for Command and Control Warfare Operations (1994). This capstone manual describes a mature C2W concept as a force multiplier, or a tool, with which an operational commander gains an advantage over his opponent. The intent of C2W operations, "is to focus the effort of modern military force on using the power of information more than destructive power to achieve military goals."[103] C2W contributes as part of an overarching military strategy, "to accomplish the assigned mission quickly while minimizing the loss of life and the destruction of property."[104]

By integrating sensors, firepower, maneuver, and electromagnetic energy, C2W offers, "the equivalent of creating our own high ground."[105]

C2W, similar to key terrain, presents opportunities that warfighters have long sought to manipulate. While C2W facilitates achieving dominance on air, sea, and land, it does not replace those forces which are capable of achieving air, sea, or land superiority.[106]

C2W unifies the otherwise separate efforts of deception, OPSEC, PSYOPs, EW, and destruction. Emerging Army doctrine proposes that CJTFs designate a commander's information operations staff officer (CIOSO) within the J3 Directorate. The CIOSO coordinates the efforts of C2W components and the battle staff, "in developing an integrated set of objectives for the various functional areas contributing to [information operations]."[107] As the staff single point of contact for C2W, the CIOSO ensures unity of effort for the CJTF.

Joint doctrine is now beginning to reflect the utility of an integrated C2W concept of operations. Emerging joint doctrine on forced entry, Forcible Entry, identifies deception operations as the leading component of C2W in order to achieve surprise. As stated previously, surprise is successful if an enemy becomes aware of friendly forcible entry too late to react effectively.[108] Deception takes either of two courses:

> The first is to increase uncertainty to forestall the enemy's timely reaction. The second is to misdirect the enemy toward a line of action which favors the friendly cause. A failure to misdirect still produces uncertainty for and untimely reaction by the enemy.[109]

The effect of deception on the enemy reduces hostile interference with the assault, force build-up, stabilization of the airhead, and the arrival of follow-on forces.

OPSEC, the second C2W component, is a process that denies critical information about friendly intentions and capabilities from the enemy. Critical information is defined as:

> specific facts about friendly intentions, capabilities, and activities vitally needed by adversaries for them to plan and act effectively so as to guarantee failure or unacceptable consequences for friendly mission accomplishment.[110]

Without critical information, opponents cannot make timely and accurate decisions. OPSEC complements defensive as well as offensive C2W objectives. The intent of OPSEC is, "to force the adversary to make faulty decisions based upon insufficient information [or] to delay the decision-making process due to a lack of information."[111] Therefore, OPSEC can be deployed independently, or it can support other C2W tools. In supporting deception, OPSEC "hides the real" by denying information, while deception portrays alternative information that is distorted or falsified.[112] Electronic warfare and destruction against enemy command and control nodes, intelligence collectors, or intelligence processors may also be employed to deny information.

Military PSYOP and deception are similar in that both convey tailored messages, the PSYOP theme and the deception story, to a prescribed audience.[113] PSYOP's purpose is, "to induce or reinforce foreign attitudes and behavior favorable to the originator's [CJTF's] objectives."[114] PSYOPs attacks the enemy's morale----the army's will to fight. PSYOPs support of offensive operations, such as forcible entry, magnifies or diminishes the effect of friendly or enemy operations. PSYOPs creates uncertainty, affects enemy reactions, causes civil-military discord, encourages unrest among dissidents, and counters enemy propaganda.[115] The potential to alter the truth provides a powerful

tool, among other C2W tools, for forcible entry operations. PSYOPs demoralizes the enemy to "believe they cannot win, thus causing [the enemy] to withdraw from conflict."[116]

The next C2W tool, electronic warfare, provides EW superiority in the electromagnetic spectrum. Friendly and enemy theater operational functions (command and control, intelligence, logistics, fires, maneuver and movement, and protection) require dominance of the electromagnetic spectrum. EW's diverse composition makes it an essential part of counter-C2 and C2-protection.[117] As part of counter-C2, electronic attack (EA) employs antiradiation missiles, directed energy, electromagnetic jamming, and electromagnetic deception. Through C2-protection, electronic protection (EP) includes emissions control, electromagnetic hardening, and EW frequency deconfliction. Electronic warfare support (ES) gathers information from enemy communications (radios) and noncommunications emitters (radars) for the purposes of target and situation development. ES provides valuable intelligence for EA and destruction against enemy command and control nodes. At the same time, ES provides valuable feedback as to how well deception, OPSEC, and PSYOPs are working towards to accomplish C2W objectives.[118] EW controls the predominate medium through which all C2W tools are transmitted and evaluated. C2W effectiveness can be attributed directly to the CJTF's integration and coordination of EW.

Destruction, the last C2W component, also contributes towards the success of C2W. When used independently or in conjunction with other C2W tools, C2-destruction, "should be timed for just before the adversary needs a certain C2 function to preclude reconstitution."[119] C2W emphasizes the destruction of targets within the context of the C2W

plan to achieve maximum effect and surprise. After C2W operations have caused uncertainty in the mind of the enemy commander, destruction may achieve significant effects by attacking the enemy when he needs his communications or intelligence infrastructure the most. Meanwhile, during this window of opportunity, the CJTF exploits enemy disorganization to accomplish his mission rapidly. The targeting process and the targeting cell already exist to destroy operational targets; for maximum effect, planners must synchronize target attack at the ideal time to work in concert with the C2W concept.

Thus, joint doctrine has addressed the necessity of joint planning and execution in order to capitalize on the interrelated and complementary effects of C2W. With current C2W doctrine as the standard, what conclusions can be drawn from Operations Urgent Fury and Just Cause?

As a basis for analysis, this monograph used command structure, intelligence, and integration as a means to address key C2W issues. The case studies have indicated the importance of each of these criteria, and in addition, have offered several others. Each consideration will be presented in turn.

First, JTF command structures should strive for unity of command over unity of effort. Unity of command provides more authority and centralized control to the operational commander. JTF commanders can also organize their forces and staffs to include C2W planners and capabilities. Ideally, these JTF augmentees are identified and trained during exercises. When identified and assembled early in the planning process, the C2W experts can devote their undivided attention to plan development. Led by a command information operations staff officer

(CIOSO), this C2W cell focuses on C2W objectives. Without designated experts, planners typically consider C2W as an afterthought and lose precious planning time.

If command structure is an operational commander's first consideration, then intelligence is his second. C2W vulnerabilities are derived predominantly from HUMINT. Although the U.S. holds a vast advantage in intelligence gained from high-technology sources, C2W depends upon intelligence collection from human sources. The nature of C2W requires this. HUMINT validates leader psychological profiles, potential PSYOPs themes, command structures, and force dispositions. Future technological capabilities cannot replicate HUMINT's contribution to C2W. The case studies illustrate the degree of C2 dominance when HUMINT is poor (Grenada) and when it is good (Panama).

Whereas command structures and intelligence are essential prerequisites for C2W, its integration depends upon good staff work. C2W Operations clearly identifies C2W products in each planning phase during the deliberate or crisis action planning process. C2W meshes neatly with either planning process. As a relatively new concept, C2W staff officers must ask their operational commander the right questions to obtain commander's guidance and C2W objectives.

The case studies support the conclusion that C2W objectives and concepts change in succeeding phases of forced entry. To achieve surprise, OPSEC and deception prevail until the assault begins. At that point, the other components, destruction, EW, and PSYOPs, assume a stronger emphasis. It follows that C2W will subsequently change when the forced entry phase transitions into the combat operations phase or when the combat operations phase enters post-conflict activities.

Available time plays a major role in determining C2W objectives. Joint doctrine stressed that deception would support surprise in forced entry operations. While deception operations may be possible in deliberate planning, in crisis action planning, such as Operation Urgent Fury, nothing more elaborate than an emergency deployment readiness exercise may be possible. Overt actions such as portraying a naval exercise near Grenada would not have stood the test of believability. The operation in Grenada relied extensively on OPSEC. Time-constrained planning forced an OPSEC focus.

Finally, the last consideration is the media. During Operation Urgent Fury, the media attention given to U.S. preparations caused significant headaches for operational planners who were trying to preserve surprise. The media may inadvertently betray U.S. intentions in trying to piece together what is happening. Before the assault, U.S. planners must thoroughly address public affairs operations to influence information releases in the friendly and enemy information systems. Public affairs planners must be an integral part of the C2W planning cell. Proactive planning seeks to minimize "knee-jerk" reactions to news releases.

C2W is a viable tool that JTFs conducting forced entry can use now. C2W in forced entry operations achieves surprise at the operational level through a carefully crafted C2W concept. With surprise, an operational commander can bring his other tools to bear and take advantage of opportunities he has created. The integration of each of the C2W components previously occurred without a holistic vision of the complementary effects that one component had for another. Today, C2W capitalizes on America's joint warfighting capability. Jointness

through C2W causes problems for potential enemies which lack either joint or C2W sophistication. As an operational commander's tool, C2W provides a means to gain the upper hand while forcing the enemy to react to U.S. thrusts rather than act on his own accord. The key to its success lies in the imagination of the commander and the training of the staff.

ENDNOTES

1. United States Army, FM 100-6, Information Operations (Fort Monroe, VA: Department of the Army, 1994), p. 2-1. Hereafter referred to as Information Operations.

2. Ibid., p. 2-4.

3. Joint Chiefs of Staff, Joint Pub 1-02, Dictionary of Definitions and Terms (Washington, D.C.: Joint Chiefs of Staff, 1994), p. 78.

4. James J. Schneider, "Theoretical Paper No. 3: The Theory of Operational Art," (Fort Leavenworth, KS: School of Advanced Military Studies, 1988), p. 6.

5. United States Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 1993), pp. 3-1, 3-7 to 3-12. Force projection consists of eight potential stages: mobilization, pre-deployment activity, deployment, entry operations, operations, war termination and postconflict operations, redeployment and reconstitution, and demobilization. Each stage must blend with the others to produce a feasible concept of operations. Entry operations must support mission accomplishment.

6. United States Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 1993), pp. 3-7 to 3-12.

7. United States Army Training and Doctrine Command, FM 90-xx, Forcible Entry (Initial Draft) (Ft. Monroe, VA: Training and Doctrine Command, 1993), pp. II-8. Hereafter referred to as Forcible Entry.

8. Ibid., p. II-9.

9. United States Army, FM 90-26, Airborne Operations (Washington, D.C.: Department of the Army, 1990), p. 1-8. See also Forcible Entry, p. IV-2.

10. Joint Chiefs of Staff, Joint Pub 3-58, Joint Doctrine for Military Deception (Washington, D.C.: Joint Chiefs of Staff, 1994), p. II-1.

11. Information Operations, p. 3-2.

12. Joint Chiefs of Staff, Joint Pub 3-13, Joint Doctrine for Command and Control Warfare Operations (Second Draft) (Washington, D.C.: Joint Chiefs of Staff), p. I-5. Hereafter referred as C2W Operations. Total dominance of an enemy's C2 may produce C2 supremacy. However, while C2 supremacy may be the goal in war, C2 superiority may be the goal in operations other than war. The degree of dominance depends upon the aim.

13. Ibid., pp. II-7 to II-8.

14. Ibid.

15. Ibid., pp. 2-10 to 2-11.

16. Ibid.

17. Forcible Entry, p. II-5.

18. Joint Chiefs of Staff, Joint Pub 0-2: Unified Action Armed Forces (UNAAF) (Washington, D.C.: The Joint Chiefs of Staff, 1989), p. II-18.

19. Joint Chiefs of Staff, Joint Pub 5-00.2, Joint Task Force Planning Guidance and Procedures (Washington, D.C.: Joint Chiefs of Staff, 1991), p. II-9.

20. Forcible Entry, p. I-5.

21. FM 90-26, Airborne Operations, p. 1-10.

22. FM 100-5, Operations, p. 2-5.

23. Joint Pub 5-00.2, Joint Task Force Planning Guidance and Procedures, pp. D-1 to D-3.

24. Forcible Entry, p. II-5.

25. Information Operations, p. 4-37.

26. Joint Pub 5-00.2, Joint Task Force Planning Guidance and Procedures, p. C-1.

27. Forcible Entry, p. I-9.

28. Joint Pub 5-00.2, Joint Task Force Planning Guidance and Procedures, p. J-3.

29. Mark Adkin, URGENT FURY, The Battle for Grenada (Lexington, MA: Lexington Books, 1988), pp. 117, 271-3.

30. Ibid., p. 119.

31. Ibid., p. 127.

32. Adkin, p. 119.

33. Metcalf, p. 282.

34. Joseph Metcalf III, "Decision Making and the Grenada Rescue Operation," in James G. March and Roger Weissinger-Baylon et al., eds., Ambiguity and Command (New York: Harper Collins Publishers, 1986), p. 282.

35. Forcible Entry, p. II-5

36. Metcalf, p. 277.

37. Ibid., p. 280.

38. Metcalf, p. 280. Adkin, p. 127

39. U.S. Army Training and Doctrine Command, Operation Urgent Fury Assessment (U) (Fort Leavenworth, KS: Combined Arms Center, 1990), p. V-10.

40. Adkin, pp. 118-119. The closest CIA representative was located in Barbados. His initial request for information on 18 October had to be routed through the Barbados Defence Force. This information, if provided, never made it to the planners. Adkin, p. 130-1.

41. Ibid., pp. 100-101.

42. Ibid., pp. 167-170.

43. Ibid., pp. 130-131.

44. Information Operations, pp. 2-19 to 2-20.

45. C2W Operations, p. II-12.

46. Daniel P. Bolger, Americans at War, 1975-1986, An Era of Violent Peace (Novato, CA: Presidio, 1988), pp. 271-272. See also Adkin, p. 348.

47. Adkin, pp. 151.

48. Ibid., p. 132. See also Operation Urgent Fury Assessment, p. V-7.

49. Ibid., p. 134.

50. Operation Urgent Fury Assessment, p. V-1.

51. Adkin, p. 170. See also Metcalf, p. 283.

52. Hugh O'Shaughnessy, Grenada: Revolution, Invasion and Aftermath (London: Sphere Books Ltd., 1984), p. 202. See also Bolger, p. 296.

53. Ibid., p. 170.

54. Adkin, p. 121.

55. O'Shaughnessy, p. 167.

56. Operation Urgent Fury Assessment, p. C-4. See also O'Shaughnessy, p. 167.

57. Adkin, p. 134. See also Joint Pub 3-54, Joint Doctrine for Operations Security, p. D-3.

58. Ibid., p. 299.

59. Ibid., p. 137.

60. O'Shaughnessy, p. 206. United States Air Force Military Airlift Command, Urgent Fury: The United States Air Force and the Grenada Operation (U) (Scott Air Force Base, IL: Military Airlift Command, 1989), p. 104. Adkin, p. 291)

61. Ibid., p. 206.

62. Stanley Sandler, "Army Psywarriors: A History of U.S. Army Psychological Operations," Special Warfare 5 (Oct 1992): p. 23. See also Bolger, p. 313.

63. Adkin, pp. 174-5, 314.

64. Ibid., p. 329.

65. Ibid., p. 330.

66. Ibid., p. 164, 288.

67. Metcalf, pp. 287-288. See also John Vessey, "JCS Replies to Criticism of Grenada Operation," Army 34 (August 1984), p. 30.

68. Operation Urgent Fury Assessment, p. XII-7.

69. Ibid., p. XII-13.

70. Thomas Donnelly, et al., Operation Just Cause, The Storming of Panama (New York: Lexington, 1991), p. 56)

71. Lawrence A. Yates, "Joint Task Force Panama: Just Cause---Before and After," Military Review 71 (Oct 1991), p. 69.

72. Donnelly, p. 77.

73. William C. Bennett, "Just Cause and the Principles of War," Military Review 71 (Mar 1991), p. 9.

74. Yates, p. 69.

75. Ibid., p. 68. See also Donnelly, pp. 49, 138.

76. Donnelly, p. 399.

77. Ibid., p. 30.

78. Ibid., p. 72.

79. Ibid., p. 104. See also Bennett, p. 4.

80. Joint Chiefs of Staff, Joint Secretariat, Historical Division, Operation JUST CAUSE, Planning and Execution of Operations in Panama (U) (Washington, D.C.: Joint Chiefs of Staff, 1990), p. 45.

81. Donnelly, p. 48.

82. Ibid., pp. 63-64.

83. Ibid.

84. Ibid., pp. 32, 48.

85. Bennett, p. 3.

86. Donnelly, pp. 59, 71, 76. See also Bennett, p. 3.

87. Ibid., p. 58.

88. Ibid., pp. 79, 86.

89. Ibid., p. 91.

90. Robert R. Ropelewski, "Planning, Precision, and Surprise Led to Panama Successes," Armed Forces Journal International (Feb 1990), p. 28.

91. Bennett, p. 10.

92. Ibid., p. 10. See also Ropelewski, p. 28.

93. Donnelly, p. 49.

94. Joint Pub 3-58, Joint Doctrine for Military Deception, p. I-1.

95. Donnelly, pp. 102-103.

96. Ibid., p. 101.

97. Ibid., p. 71.

98. Ibid., p. 140.

99. Ibid., p. 76.

100. Ibid., p. 112.

101. Chris Bailey, "PSYOP-unique Equipment: Special 'Weapons' of Communication," Special Warfare 5 (October 1992), pp. 32-33.

102. Bennett, p. 7.

103. C2W Operations, p. I-1.

104. Ibid., p. II-2.

105. Verl R. Stanley and Phillip L. Noggle, "Command and Control Warfare--Seizing the Initiative," Signal 38 (April 1984), p. 23.

106. C2W Operations, pp. II-2 to II-3.

107. Information Operations, p. 4-36.

108. United States Army, FM 90-2, Battlefield Deception (Washington, D.C.: Department of the Army, 1988), p. 1-32. See also Forcible Entry, p. I-9.

109. Forcible Entry, p. II-16.

110. Joint Chiefs of Staff, Joint Pub 3-54, Joint Doctrine for Operations Security (Washington, D.C.: Joint Chiefs of Staff, 1991), p. III-1.

111. Ibid., p. IV-2.

112. Ibid., p. I-2.

113. Joint Pub 3-58, Joint Doctrine for Military Deception, p. II-2.

114. Joint Chiefs of Staff, Joint Pub 3-53, Doctrine for Joint Psychological Operations (Washington, D.C.: Joint Chiefs of Staff, 1993), p. I-1.

115. Ibid., pp. V-4 to V-5.

116. Forcible Entry, p. IV-20.

117. Ibid., pp. III-12 to III-13.

118. United States Army, FM 34-1, Intelligence and Electronic Warfare Operations (Washington, D.C.: Department of the Army, 1994), pp. 2-20 to 2-22. See also C2W Operations, pp. C-22 to C-28.

119. C2W Operations, p. IV-12.

SELECTED BIBLIOGRAPHY

Books

Adkin, Mark. URGENT FURY, The Battle for Grenada. Lexington, MA: Lexington Books, 1988.

Bolger, Daniel P. Americans at War, 1975-1986, An Era of Violent Peace. Novato, CA: Presidio, 1988.

Donnelly, Thomas et al. Operation Just Cause, The Storming of Panama. New York: Lexington, 1991.

Metcalf, Joseph III. "Decision-Making and the Grenada Operation." In Ambiguity and Command: Organizational Perspectives on Military Decision-Making. Boston, MA: Pitman, 1986.

O'Shaughnessy, Hugh. Grenada: Revolution, Invasion and Aftermath. London: Sphere Books Ltd., 1984.

Government and Military Publications

Joint Chiefs of Staff. Joint Pub 0-2: Unified Action Armed Forces (UNAAF). Washington, D.C.: The Joint Chiefs of Staff, 1989.

_____. Joint Pub 1-02, Department of Defense Dictionary of Military and Associated Terms. Washington, D.C.: Joint Chiefs of Staff, 1994.

_____. Joint Pub 3-53, Doctrine for Joint Psychological Operations. Washington, D.C.: Joint Chiefs of Staff, 1993.

_____. Joint Pub 3-54, Joint Doctrine for Operations Security. Washington, D.C.: Joint Chiefs of Staff, 1991.

_____. Joint Pub 3-58, Joint Doctrine for Military Deception. Washington, D.C.: Joint Chiefs of Staff, 1994.

_____. Joint Pub 5-00.2, Joint Task Force Planning Guidance and Procedures. Washington, D.C.: Joint Chiefs of Staff, 1991.

_____. Joint Secretariat. Historical Division. Operation JUST CAUSE, Planning and Execution of Operations in Panama (U). Washington, D.C.: Joint Chiefs of Staff, 1990. Secret.

Sullivan, Gordon R. and Togo D. West, Jr. Decisive Victory: America's Power Projection Army. Washington, D.C.: Department of the Army, 1994.

United States Air Force Military Airlift Command. Urgent Fury: The United States Air Force and the Grenada Operation (U). Scott Air Force Base, IL: Military Airlift Command, 1989. Secret.

United States Army. FM 33-1, Psychological Operations. Washington, D.C.: Department of the Army, 1993.

_____. FM 34-1, Intelligence and Electronic Warfare Operations. Washington, D.C.: Department of the Army, 1994.

_____. FM 90-xx, Forcible Entry (Initial Draft). Ft. Monroe, VA: Training and Doctrine Command, 1993.

_____. FM 90-2, Battlefield Deception. Washington, D.C.: Department of the Army, 1988.

_____. FM 90-26, Airborne Operations. Washington, D.C.: Department of the Army, 1990.

_____. FM 100-5, Operations. Washington, D.C.: Department of the Army, 1993.

_____. FM 100-6, Information Operations (Initial Draft). Washington, D.C.: Department of the Army, 1994.

_____. FM 101-5, Command and Control for Commanders and Staff (Initial Draft). Ft. Leavenworth, KS: Department of the Army, 1993.

_____. Lessons Learned Grenada (U). Washington, D.C.: Department of the Army, 1985. Secret.

_____. TRADOC Pam 525-5, Force XXI Operations. Fort Monroe: United States Army Training and Doctrine Command, 1994.

U.S. Army Center of Military History. OPERATION URGENT FURY: The United States Army in Joint Operations (U). Washington, D.C.: U.S. Army Center for Military History, 1986. Secret.

U.S. Army Center for Army Lessons Learned. Bulletin No. 3-88, Deception. Ft. Leavenworth, KS: Center for Army Lessons Learned, 1988.

_____. Bulletin No. 90-9, Operation Just Cause Lessons Learned. Ft. Leavenworth, KS: Center for Army Lessons Learned, 1990.

U.S. Army Training and Doctrine Command. Operation Urgent Fury Assessment (U). Fort Leavenworth, KS: Combined Arms Center, 1990. Secret.

Articles

Bailey, Chris. "PSYOP-unique Equipment: Special 'Weapons' of Communication." Special Warfare 5 (October 1992), pp. 32-34.

Bennett, William C. "Just Cause and the Principles of War." Military Review 71 (Mar 1991): 2-13.

Bolger, Daniel P. "Special Operations and the Grenada Campaign." Parameters (Dec 1988): 49-61.

"Combat Planning Dominates Panama's Communications." Signal 44 (Mar 1990): 95.

Ropelewski, Robert R. "Planning, Precision, and Surprise Led to Panama Successes." Armed Forces Journal International (Feb 1990): 26-32.

Sandler, Stanley. "Army Psywarriors: A History of U.S. Army Psychological Operations." Special Warfare 5 (Oct 1992): 18-25.

Stanley, Verl R. and Phillip L. Noggle. "Command and Control Warfare--Seizing the Initiative." Signal 38 (Apr 1984): 23-26.

Vessey, John, "JCS Replies to Criticism of Grenada Operation." Army 34 (Aug 1984): 28-38.

Yates, Lawrence A. "Joint Task Force Panama: Just Cause---Before and After." Military Review 71 (Oct 1991): 58-71.

Monographs and Papers

Senkovich, Steven W. "From Point Salines to Panama City: The Evolution of Command and Control in Contingency Operations." Ft. Leavenworth, KS: School of Advanced Military Studies, 1990.